

"It's Fantastic . . . We Can't Believe It . . ."



AT 850 MILES over Australia, Gemini XI astronauts exclaimed to the entire world "It's fantastic . . . we can't believe it." "I see all the way up the top of the world." This photo, which was made when Gemini XI reached its 850 mile apogee, shows the Western half of Australia from Perth to Port Darwin.

Schirra, Eisele, Cunningham — Second Manned Apollo Crew Selected

Astronauts Walter M. Schirra, Jr., Donn F. Eisele, and Walter Cunningham yesterday were named as the crew of the second manned Apollo flight.

Schirra will be command pilot, Eisele senior pilot and Cunningham will be pilot. Backup crewmen are Frank Borman, command pilot; Thomas P. Stafford, senior pilot; and Michael Collins, pilot.

The flight, scheduled for 1967, is presently planned as an open-end, earth orbital mission of up to 14 days. Increased emphasis on scientific experiments as well as the repeating of some activities from the first manned flight will characterize the mission.

Schirra, 43, a Navy captain, is one of the original seven astronauts. He flew the 6-orbit Mercury-Atlas 8 mission in the "Sigma 7" spacecraft and was command pilot of the Gemini 6 spacecraft which performed the world's first rendezvous with another orbiting spacecraft.

Eisele, 36, an Air Force major, was named as one of the third group of astronauts in October 1963.

Cunningham, 34, is a civilian. He was named in the third group of astronauts.

Borman, 38, is an Air Force colonel. He was command pilot of the 14-day Gemini 7 mission.

Stafford, 36, an Air Force lieutenant colonel, was pilot of the Gemini 6 and command pilot of Gemini 9.

Collins, 35, is an Air Force lieutenant colonel. He was the pilot of the Gemini 10 mission, in which he performed extra-vehicular activity.

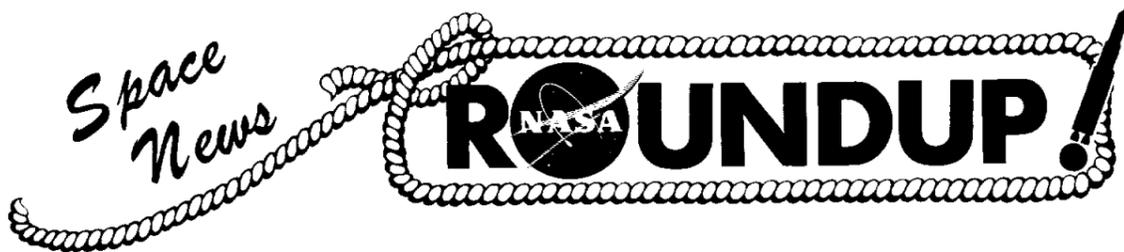
The first Manned Apollo crew is comprised of Virgil I. Grissom, command pilot; Edward H. White, senior pilot and Roger Chaffee, pilot.

Grissom is a veteran Mercury and Gemini pilot. He flew the Mercury-Redstone flight, the second manned flight in "Liberty Bell 7" and was command pilot on GT-3, the first manned Gemini flight.

White, pilot of Gemini IV, was the first American astronaut to perform extra-vehicular activity. It is Chaffee's first space flight.

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VOL. 5, NO. 25 MANNED SPACECRAFT CENTER, HOUSTON, TEXAS SEPTEMBER 30, 1966

XI DOWN, ONE TO GO:

Gemini XI Crew Face The Press Give Details Of Flawless Flight

Gemini XI astronauts Charles "Pete" Conrad and Richard Gordon this week gave the press the "low down" on man's highest venture into space.

During a two hour press conference in the Auditorium, Conrad and Gordon detailed their record breaking flight, including the precision first orbit rendezvous, the spectacular 850-mile high Apogee, and man's first tethered-vehicle exercise. They also revealed their disappointment when they had to curtail Gordon's umbilical EVA when he complained of being tired.

George Low, Deputy Director, used Conrad's own words to describe Gemini XI. He said "the flight was truly fantastic."

Command Pilot Conrad described the M=I rendezvous by stating "we were right on the money." He said "As soon as the ground told us we were in an 87 by 151 which is what we were shooting for, we knew that the

rest of the rendezvous was going to be very smooth."

Conrad stated "the most significant factor of the M=I rendezvous is although we had good information from the ground we accomplished the rendezvous totally with information within the spacecraft."

He said the rendezvous put Gemini XI in station keeping position with the Agena, "right about the time we expected it to with respect to our fuel schedule and we were quite pleased."

"Our next biggest thrill," Conrad told the press MSC officials, friends and family members, was "lighting that 16,000 pound thrust engine (Primary Propulsion System of the Agena). I don't think Dick and I will ever forget that. That was our longest steam cat-shot backwards that either one of us ever had."

Pilot Gordon admitted he was tired even before he egressed from the spacecraft to start his

scheduled 115-minute umbilical EVA. He said he worked pretty hard in getting the gold plated EVA visor in place and he had to call upon Conrad to help get it affixed properly.

"Well, the point of this story," Gordon related "that I was tired and had a pretty high heart rate before I ever opened the hatch. And this probably put us a little behind as far as my expenditure of energy is concerned."

When the hatch was opened, Gordon said "all the debris and junk we had found in the spacecraft went out the window, or out the door, really. And I was right along with the rest of the debris."

Conrad added here, "I remember that. The only thing I saw was his feet going out the hatch."

"Hey, grab me, I'm leaving you," Gordon called to Conrad.

(Continued on Page 2)

Second Manned Apollo Crew



2nd MANNED APOLLO—Astronauts Walter M. Schirra, Jr., Donn F. Eisele and Walt Cunningham. The crewmen were named yesterday by the National Aeronautics and Space Administration. Schirra is a veteran pilot from both Mercury and Gemini manned flights. This marks the first space flight for Eisele and Cunningham. The second manned Apollo flight is scheduled for 1967.

Armstrong And Gordon To Take South American Goodwill Tour

Astronauts Neil Armstrong and Richard Gordon begin a three week good-will tour of South American countries on October 7.

This makes the fourth overseas good-will trip for Gemini astronauts. Gemini IV crew members James McDivitt and Edward H. White made a quick trip to Paris, France following their flight; Gemini V astronauts

L. Gordon Cooper and Charles "Pete" Conrad toured South Africa and Gemini VI command pilot Walter M. Schirra, Jr and Gemini VII command pilot Frank A. Borman took part in a Far Eastern good will trip.

Astronaut Armstrong's wife and astronaut Gordon's wife will accompany their husbands on the 10-nation trip.

"... This is not a job—it is a privilege."



HOUSTON DEAD AHEAD—Astronaut Richard Gordon photographed this scene as Gemini XI passed near Houston during the standup portion of his EVA. Gordon commented "Boy does Houston ever look beautiful down there." Houston is approximately center of the photo with Galveston Bay and Galveston to the right. The entire Texas Gulf is seen in this panoramic view which stretches from Texas to the Florida Keyes, upper right.

Gemini X spacecraft is scheduled to take a 60-day tour of the Japanese Islands during the next several weeks.

XI Crew Press Confab (Continued from Page 1)

Gordon explained in detail how difficult it was for him to hold onto the TDA and detach the tether line. He described the work load in this area "as the biggest shock of my life." "And this was a very tiring operation in itself in that I had to use my feet wedged between the spacecraft and the TDA to hold myself in place." He was forced to hold onto the TDA handhold with his left hand and work with his right to free the tether line.

"Well, a little simple task that I had done many times in training to the tune of about 30 seconds lasted about 30 minutes," Gordon stated. The unexpected work load in releasing the tether from the TDA and then attaching it to the docking bar on the Gemini tired him out.

Gordon stayed with the tether until he had it secured to the docking bar on the Gemini. He said "I am sure all of you that heard part of the air-to-ground can probably imagine the amount of work that it was. Well, I was so single minded at this time that

I was going to get that tether on come hell or high water."

Conrad recounted the PPS burn. He said the 26-second burn was just "a fantastic ride in itself, going from Zero G to about 1.1 G, eyeballs out, and it reaches full thrust in about five milliseconds . . . Its just one big bang out there . . ."

The Gemini XI record setters then took turns in narrating films and still photographs which they took during the record making 850 mile ride into space.

The tether exercise followed. Conrad described the gyrations of the TDA at the end of the 100-foot tether and of how the two vehicles spinned and rolled together for nearly three hours.

After completing the tether exercise and performing the D-15 experiment, Conrad explained "we finished the longest day we'd ever spent, and that was a long day. We got it all done and we're real happy."

The final exercise prior to re-entry for the Gemini XI crew was the "fly-by" of the TDA. Following the completion of the tether exercise Gemini XI trailed the TDA throughout the final night in space.

Gordon described this final rendezvous maneuver as a "piece of cake." He said they came close enough to the Agena to dock with it again.

Conrad concluded by describing the automatic reentry as being "on the money."

XII CREW AND HHH



VICE PRESIDENT Hubert H. Humphrey, Chairman of the National Aeronautics and Space Council, discussed NASA's space progress with Gemini XII astronauts James Lovell, Edwin "Euzz" Aldrin and J. S. McDonnell, Board Chairman of McDonnell Company during recent inspection of McDonnell's air and space facilities in St. Louis. The Gemini XII crew showed the Vice President the 30-foot space chamber where Gemini environmental tests were conducted and joined him in an inspection of the Gemini IX spacecraft flown by Tom Stafford and Eugene Cernan.

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WHERE YOU BANK OR WORK

EVERY DROP COUNTS



BLOOD DONOR—Mrs. Elizabeth Underwood, RN, of the Blood Services of Houston, makes preparations for blood donor Dr. Edward L. Beckman. Dr. Beckman, Chief of Occupational and Environmental Medicine Office, was one of 47 MSC donors on the bloodmobile's recent visit to the center. The MSC Group Blood Deposit Program, which is sponsored by the EAA, has scheduled another bloodmobile visit for October 5-6, 1966. MSC employees interested may contact their nearest EAA committeeman: Ed Stelley, 3378; Don Bray, 4766; Howard Allison, 4611; Sandy Burdsal, 5156; or Hal Bishop, 5333.

BATTER UP!



PICNIC CAPTAINS—Liz Bolin, Office Assistant Director for Flight Operations, warms up her batting eye as Charlotte Maltese, Office of the Special Assistant to the Director, adds her suggestions. The two girls are captains of the softball teams scheduled to be part of the 1966 MSC Picnic tomorrow, October 1 at the Galveston County Park in League City. This year's event will have an old-West motif.

HELP TO OILMEN, FARMERS—

Space "Spin-Offs" Could Benefit Nation, World

Basic research in space exploration has already yielded better frying pans and welding techniques, but now it augurs even more practical benefits of widespread application for John Q. Public.

Those who are in a position to know are fully agreed the "potential applications" of space technology could have a greater effect on earth than is now generally apparent to the average layman.

In fact, Dr. Robert C. Seamans, Jr., the National Aeronautics and Space Administration's deputy administrator, in discussing these "spin-offs" as they are known in the space trade—said: "They could well alter the history and economics of every nation of the globe."

He suggests that instead of looking outward from earth to space that we look earthward from space. The picture is a different one from there.

He says that manned orbiting spacecraft could have a number of uses related directly to earth. He lists, among these, spacecraft that will help man locate mineral and petroleum reserves, especially in remote regions of the world.

Dr. Seamans explains that this is possible by the use of remote sensors handled by astronauts which measure the light waves reflected from the earth's surface—not just the visible spectrum, but also in the infrared and ultraviolet regions. "This," he says, "can give a clear-cut indication of the existence and location of mineral and petroleum reserves."

Seamans also points out that farmers, now already enjoying better and faster weather satellites, can expect some crop tips from manned spacecraft. Photographs, using a variety of filters, can disclose crop conditions or detect diseased trees in a forest. By the same technique, predictions can be made on when the spring run-off will take place from melting snow in a mountain region.

Pointing to gains already made by navigation and geodetic satellites, Dr. Seamans said, "Our maps and charts, particularly in ocean areas, are far more accurate than ever before was possible."

He foresees the day, as a direct result of technology gained in navigation satellites and manned spaceflight, when manned spacecraft will function as control towers in space to help handle the ever increasing speed and volume of traffic on the world's airways.

Another authority on the Nation's space program, Dr. Edward C. Welsh, executive secretary of the National Aeronautics and Space Council, sees the nation's space commitment as not only one of scientific and technological progress, but also spiritual and political in character. He sees the space program as, "... a seedbed of invention, a spur to our productivity, a source of insurance for our national security, a stimulus to learning, and a world-wide ambassador for space."

"Because of it (space research)," Dr. Welsh says that "our chances of improving medical research and finding a cure for cancer or heart disease are greater—not less."

According to Dr. Welsh, the space program contributes importantly to advances in practically all other lines of endeavor, and stimulates the national economy at the same time. "We are wealthier, not poorer, because of the space effort," he said.

Dr. Welsh would agree with Dr. Seamans in the prediction that advanced communications satellites will one day provide television and radio broadcasting for the entire world, and that advances in weather satellites will one day make it possible to program the earth's entire atmosphere on a computer.

Scientists Sought For Astronaut Role

The National Aeronautics and Space Administration and the National Academy of Science earlier this week announced they are seeking applicants for a second group of scientist-astronauts for NASA's manned spaceflight program.

The Academy, in a joint announcement with the NASA, stated it is seeking experienced scientists of exceptional ability "to conduct scientific experiments in manned orbiting satellites and to observe and investigate the lunar surface and circumterrestrial space. The announcement follows a request from NASA Deputy Administrator Robert C. Seamans, Jr., that the Academy recruit and nominate a second group of scientists to NASA for final selection and training as astronauts.

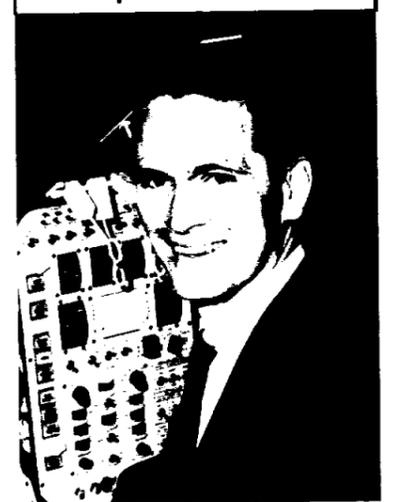
The Academy is inviting applications from U.S. citizens and persons who will be citizens on or before March 15, 1967, no taller than six feet, born after August 1, 1930, and having a doctorate in natural sciences, medicine, or engineering. Applicants will be required to meet physical qualifications for pilot crew members, but exceptions to any of the above requirements will be allowed in outstanding cases.

Selection procedures will be similar to those used in choosing the first group of scientists as astronauts in 1965. Applications from candidates who meet preliminary educa-

tional and physical requirements will be ranked by an Academy panel on the basis of scientific qualification. From this list, NASA will make its final selection, following thorough physical examinations of the candidates and a limited program to determine their ability to function under simulated conditions of space flight.

Deadline for applications has been set for Midnight, January 8, 1967. Successful applicants will be asked to report to the Manned Spacecraft Center on July 15, 1967.

Co-Op of the Month



MISSION PLANNER—Ted L. Turner, Jr. is a co-op employee of the Flight Analysis Branch of the Mission Planning and Analysis Division. He is a mathematics major and is in his junior year at the University of Houston.

GIVE THE
UNITED WAY

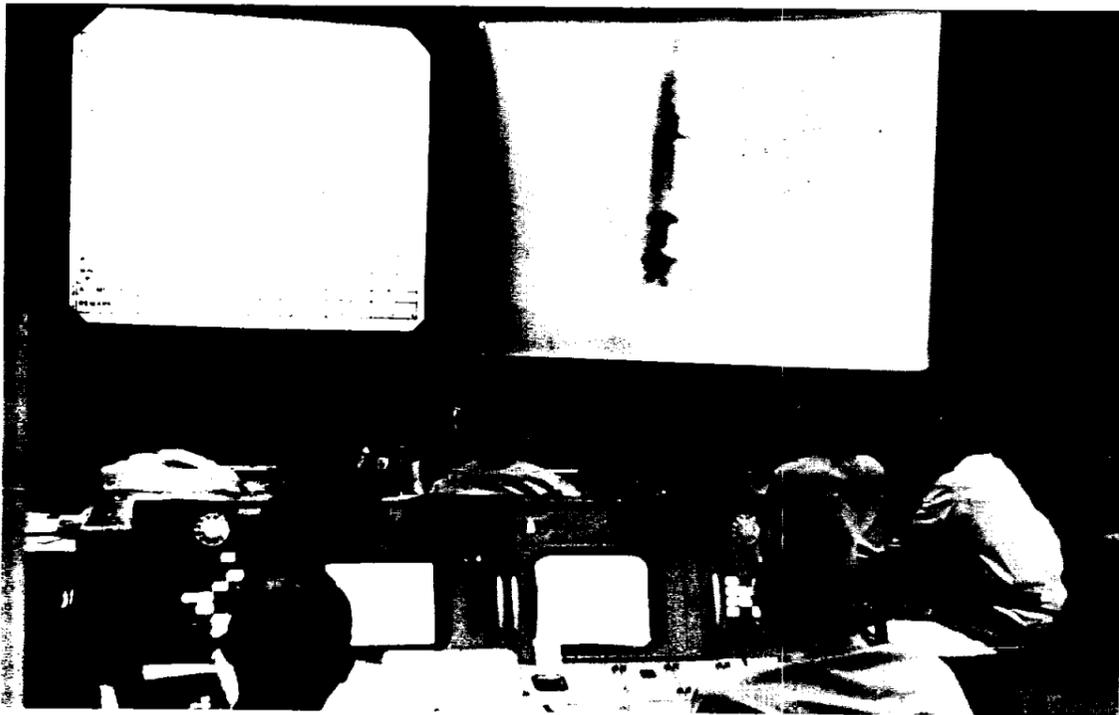
Sights and Sounds of Gemini XI

Captured at Mission Control

— and Recorded on Film



Flight Director Clifford E. Charlesworth . . .



. . . and DOD Recovery personnel view Gemini XI.



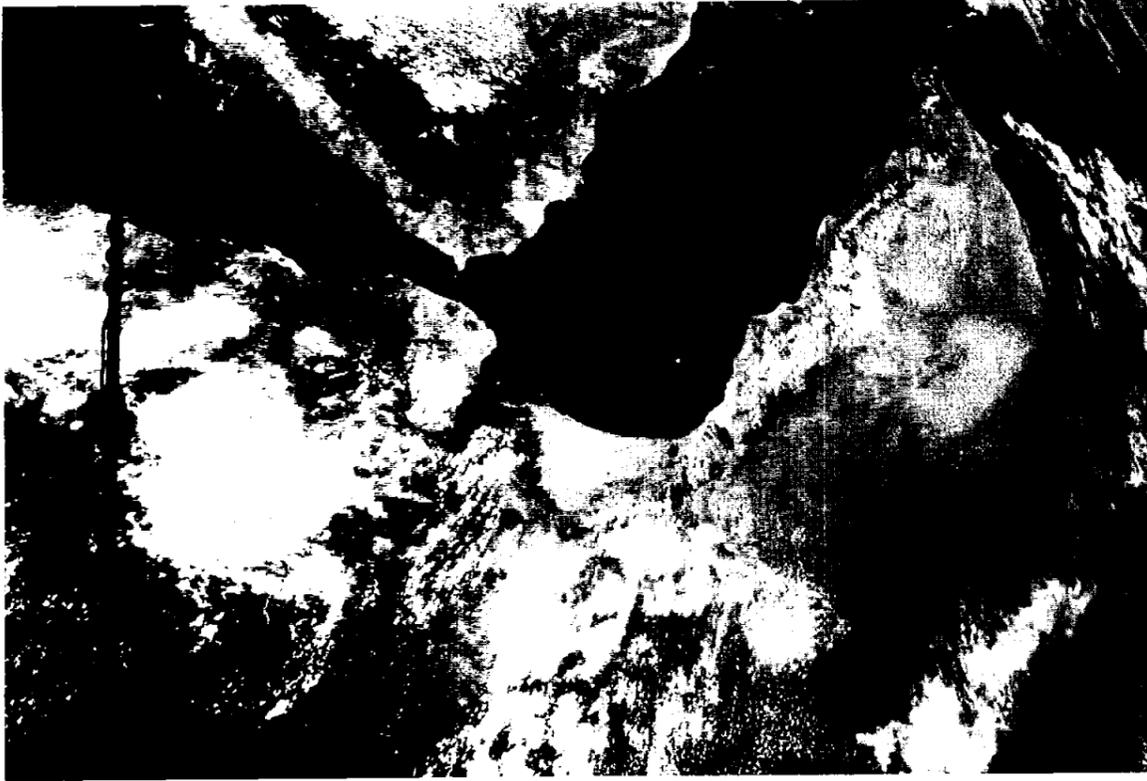
Mrs. Jane Conrad is briefed by George M. Low, Deputy Director



and Astronaut Gordon's wife and mother were also on hand.



America's first "Space-jockey" affixes tether.



On the way up to record heights, Gemini XI passes 400 miles above Arabian Peninsula and Africa.



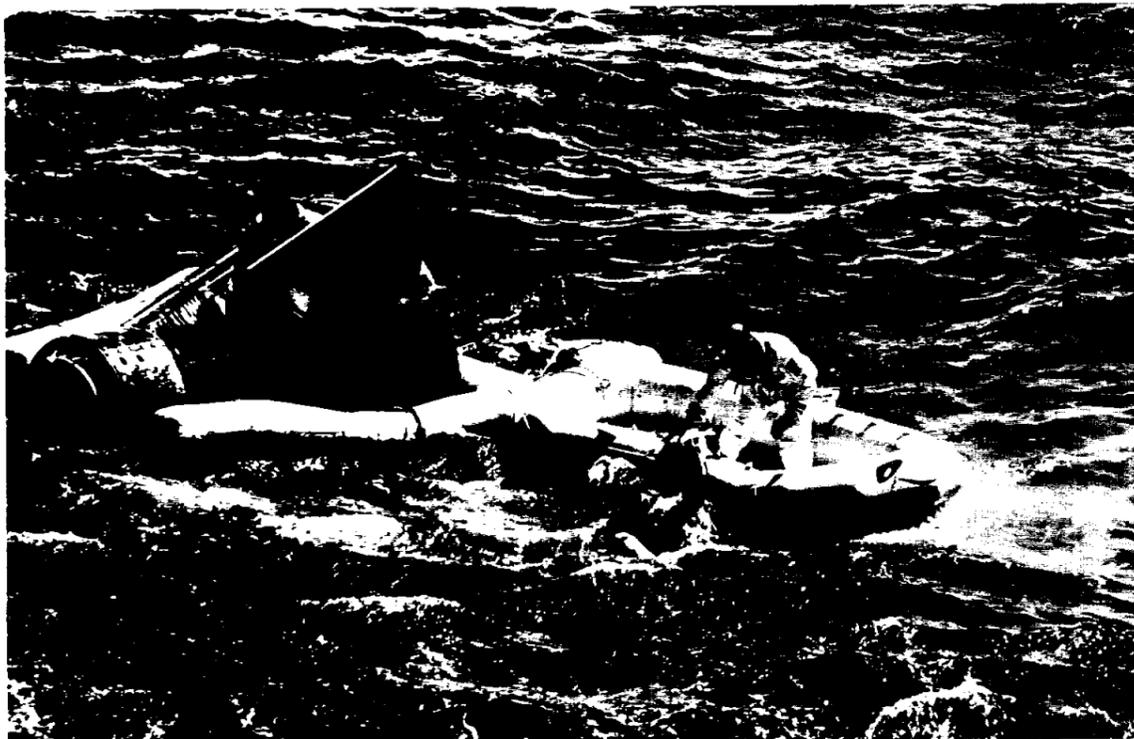
... and at 700 miles over the Indian Ocean and Australia.



The start of space tow-job . . .



... which saw gyrations described by Gemini XI crew like "skipping rope."



Then down to a pin-point landing and Navy swimmer's welcoming hand.



A big "Thanks" to all from Pete and Dick.

The SPACE NEWS ROUNDUP, an official publication of the Manned Spacecraft Center, National Aeronautics and Space Administration, Houston, Texas, is published for MSC personnel by the Public Affairs Office.

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Public Affairs Officer Paul Haney
Editor Terry White
Staff Photographer A. "Pat" Patnesky

Bridge Clubbers Will Hold Olympiad Oct. 11

The MSC Duplicate Bridge Club will hold a special Master Point game, the International Olympiad, on October 11. Proceeds from this game will help defray the expenses of the American team in the next international games competition.

The regular Club Master Point game will be on October 25 and the club will hold its annual Open Pairs Championship Tournament on November 1 and 8. Winners of the Championship Tournament will receive a trophy.

Winner of the third 1966 series award, which ended with the September 20 game was Joe Snyder with Bob Wiley placing second. The final series of the 1966 season will commence with the October 4 game.

"Lunarfins" Sponsor Scuba and Senior Life Saving Courses

The MSC "Lunarfins" Skin and Scuba Diving Club is offering a Scuba training course and Red Cross Senior Life Saving Course.

The Scuba course begins October 4 at 7 P.M. and meets twice weekly. The course consists of lectures and training sessions.

Those interested in the Scuba course may contact Jim Peacock or Hugh Scott at Ext. 2457.

The Life Saving course which will meet each Wednesday 6 to 9 P.M. will be held at the Webster Community Center Pool. Those interested in registering for this course may call Bryan Conry at HU 8-3300, Ext. 537.

**EVERY GOOD GUY
GIVES THE
UNITED WAY**

Cost Reduction Corner

In previous years, most supplies not available from General Services Administration were acquired through procurement channels from commercial sources. The carrying cost of the inventory was high because the lengthy procurement lead time that was required tied up large amounts of the inventory in the pipeline. For FY 65, under this method of procurement, the carrying cost (Commitments) for sales of \$2,378,000 was \$2,077,000 or 87 percent of the sales.

On May 28, 1965, through agreements made with Department of Defense activities, the MSC Supply Branch of the Administrative Services Division, adopted MILSTRIP (Military Standard Requisitioning and Issue Procedures). As a result, as of June 27, 1966 a total of \$1,093,000 in savings was realized by the use of MILSTRIP. The resulting savings are expected to accrue continually.

Estimated savings to John Q. Taxpayer is \$1,093,000.

MSC Aero Club Meets Oct. 4

The MSC Aero Club begins an eight week long ground school class on October 4. A training aircraft is now available for student use.

The Aero Club will hold its monthly meeting October 11 in Building 6 at 5:15 P.M. Items on the agenda include the club's fiscal plans and the club's new aircraft which was recently purchased.

Those interested in joining the Aero Club should contact Don Bray at ext. 4766.

"Moonglow 66" Tickets On Sale October 10

Tickets for "Moonglow 66" will go on sale Monday, October 10. Admission is \$1 per person.

This year's show includes a wide variety of new talent. Betty Midgett, of Procurement and Contracts Division will sing a medley of Barbra Streisand hits; Terry Slezak, Photographic Division, will sing an operatic aria; the "Astronettes" will perform a precision tap routine and a jazz dance; John Boynton, Flight Operations Directorate, will play a piano solo; Helen Ragsdale, Administrative Services Division, will do a comedy skit and Roland DuVal, Flight Support Division, will entertain with folk songs.

The acts will be accompanied by the Sam Rayburn High School Stage Band under the direction of Bob Guinn and Fred Baetge.

The stars of Texas, twenty-nine accordians and a drum, under the direction of Anthony Zinnanti, will be back again. Last year they played a medley of songs from "The Sound of Music" which they took to the Music Festival in Kansas City this summer and scored a perfect score of 100 points.

Set aside November 10 and 11 or 12 to see MSC personnel in "Moonglow 66".

OUT OF TEXAS' PAST—

Clear Lake Indians Discover Hot Wells Early, Houston Resort

In an earlier briefing on the earliest recorded history of the Clear Lake country, we followed the adventures of the first European to set foot on this part of the planet: Alvar Nunez Cabeza de Vaca, the Spanish explorer who was shipwrecked on Galveston Beach in November of 1528.

Alvar, you remember, became a slave of the cannibal Karankawa Indians, but he escaped to the bayshore, where he found the Indians friendly. When he finally got to the City of Mexico, he suggested that Spain give the Galvez Bay area back to the Indians.

You still hear tales about the Cronks. Juan Morfi, in his *Memorias*, calls them "a vile nation, pusillanimous, treacherous and extremely cruel." Noah Smithwick reports: "They lived mostly on fish and alligators,

with a man for fete days. Many were six feet in height, with bows and arrows in proportion. Their faces were rendered hideous by the alligator grease and dirt with which they were besmeared from head to foot as a defense against mosquitoes."

Not much is known about the Clear Lake Indians. They were called Orcoquisacs, and they were relatively tame. Not only were they semi-agricultural, but they were too finicky to use the mosquito repellent that the Cronks found so successful, and so the Orks were always coming down with encephalitis.

A legend says that once when an epidemic was decimating an Orcoquisac village the chief's beautiful young wife, White Doe, took sick. As she lay dying she promised that when she got to the happy hunting grounds she would intercede for her

people with the Great Spirit.

Just as White Doe expired, a young dogwood-white female deer walked out of a thicket and stood beside the chief's dead wife. Making a sign with her head, she indicated that the people were to follow her.

This they did, following the white doe up the San Jacinto River and Buffalo Bayou (which the Spaniards called Santa Rosa Aroyo) and far across the prairie to Cypress Creek. There she vanished. Near the creek the Orcoquisacs found healing springs that cured their sickness.

This legendary place has been identified as Hot Wells, in the northwestern part of Harris County, which was once a popular health resort. After that discovery the Orks never shot another white doe.

Spain disregarded Cabeza de Vaca's advice and continued to regard Clear Lake as a sphere of Spanish influence. By 1755 the French were beginning to push into the bayshore, and both they and the Spaniards tried to buy the Indian chiefs' loyalty.

The topranking chief around Clear Lake was an opportunist named Canos. First the Spaniards gave him a captain's commission with emoluments. The French then gave him an all-expense trip to New Orleans and there showered him with gifts. When the Spanish sent a diplomatic mission to Clear Lake with two packhorses loaded with potlatch, they found Captain-Chief Canos wearing a suit tailored on Canal Street.

Regional historians seldom mention it today, but as early as 1750—a quarter of a century before the American Revolution—a great overland commercial freeway crossed what is now Houston's North Side, meeting the San Jacinto River somewhere between Spring Creek and the mouth of Buffalo Bayou. This road was called the Camino Real Orcoquisac. It was the main route from what is now Laredo, on the Rio Grande, to a Spanish Mission-fort at the mouth of the Trinidad: the Mission Nuestra Senora de la Luz and the Presidio de San Augustin de Ahumada.

In 1756 the Spanish governor, Jacinto Barrios, decided to move the mission and fort to a place 20 miles west of the San Jacinto and there settle 25 Spanish colonists at a cost of 45,000 pesos.

That would have been a boost for the Cypress-Hot Wells area, but it would have bypassed Clear Lake. Anyway, Mexican politics intervened, and a year later Barrios changed his mind.

In a letter to the viceroy, the governor pronounced the whole Houston-Galveston area "unfit for settlement." Canos, the Ork chief who dressed like a Frenchman, was still the head man from the source of Clear Creek to April Fool Point.

—Sigman Byrd

Space News Of Five Years Ago

October 3, 1961—House Science and Astronautics Committee report on "Research and Development in Aeronautics" concluded that "the welfare of the Nation, in both its economic and security aspects, is dependent in no small degree on continuing aeronautical research of high caliber."

October 8, 1961—Dr. Edward C. Welsh, Executive Secretary, National Aeronautics and Space Council, said in a New York Times article: "In my view, we (The United States) do not have a division between peaceful and nonpeaceful objectives for space. Rather, we have space missions to help keep the peace and space missions to enable us to live better in peace."

October 11, 1961—NASA Administrator James Webb, speaking to the American Rocket Society said NASA

scientists "are going to consider rendezvous technique with great care before going ahead with NOVA."

October 13, 1961—The American Rocket Society presented its Aeronautics Medal to Cmdr. Alan B. Shepard for his MR-3 flight of May 5.

October 13—NASA Headquarters approved construction projects for a permanent manned spacecraft center installation at Clear Lake, southeast of Houston, Texas. Buildings to be constructed included an auditorium, project management, cafeteria, flight operations and life systems, life systems laboratory, technical services shop, central data processing, structures laboratory, research and development offices and laboratory, equipment evaluation laboratory, support offices, support warehouses and offices, and project test laboratory.

All of the Mercury and Gemini manned spacecraft weight launched so far would fill the cargo hold of one Saturn V space rocket to little more than half of its capacity.



WHERE YOU BANK OR WORK

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THANKS — — — MSC EMPLOYEES



REMEMBER DONNA KAY WILLIAMS?

Last spring MSC employees took time out for a moment to lend a helping hand to little Donna Kay, who had been severely attacked by a pair of dogs. Donna Kay suffered severe facial and scalp injuries which required extensive surgery. A fund was set up to help with the bills, and almost overnight MSC and contractor employees contributed \$800. For the last six months, Donna Kay has responded well to medical treatment. Here she is in her latest photo.



READY IF NEEDED—Fireman Forrest Morris (left) receives word from Chief Aubrey Weldon (center) and Assistant Chief Morris McWilliams. The MSC Fire Department personnel are ready for call but hope they will not be needed. "Fire Prevention" Week begins Monday, October 3.

Fire Prevention Cooperative Effort

Until Mrs. O'Leary's cow kicked over a lantern (so tradition says) that night in October 1871, fire was considered to be something you cook with. But the \$168 million property damage and 250 deaths by fire in the great Chicago fire brought public attention to the potential disaster that fire can bring.

October 9 to 15 is National Fire Prevention Week. That a week should be set aside to call attention to the dangers of fire is the result of a yearly toll of 11,700 fire deaths in this country—30 percent of whom are children. Each day fire snuffs out 32 lives, levels 1,520 homes, 14 schools, eight churches, five hospitals and nursing homes, 120 stores and 135 industrial plants.

Here at MSC we have been fortunate in having limited losses to fire, primarily through the efforts of all employees, but this is still no reason to become complacent and adopt an "it couldn't happen here" posture. For the potential is still here for some rather fierce fires and explosions, mainly the flammable chemicals and substances with which some of our people work.

It is not, however, hazardous chemicals that cause the few fires we have at MSC; it is the same source that is Number 1 nation wide—careless smoking habits such as emptying ash trays in wastebaskets and dropping lighted cigarettes and matches into combustible materials. Copy machines hanging up are the second most common source of MSC fires, followed by a few instances caused by incompatible chemicals in laboratory and storage areas.

Actually, the areas where hazardous substances are worked with are the areas most fire-conscious. For example, the explosives/ammunition industry has the best fire safety record of any industry simply because the people who work in these industries realize the hazard potential.

MSC's Fire Station has some of the most up-to-date equipment available, including three pumpers of 1250 gallons per minute, 750 gpm and 250 gpm; a rescue unit equipped with jacks, power saws and torches; a 100-foot aerial ladder truck, and a special truck carrying 40 75-lb cylinders of carbon dioxide plus 800 pounds of "Purple K" dry-chemical extinguisher for fires in electronic gear where water might do more damage than the fire.

The cooperation of MSC and contractor employees has helped keep the fire toll low at MSC, but it is up to these same employees to continue to reduce the inherent hazards.

But, if it does happen . . . Fire breaks out, dial 3211 *mucho pronto* and report the fire. Rescue and ambulance service is also available at the same extension.

If your car gets 15 miles to a gallon, you could drive 18 million miles or around the world about 700 times on the propellant required for the Apollo/Saturn V lunar landing missions.

Help MSC reach its quota in the 1967 United Fund Campaign by pledging your fair share.

MSC BOWLING ROUNDUP

Mimosa Men's League

TEAM	WON	LOST
Road Runners	13	3
Whirlwinds	11	5
Strikers	10	6
Technics	9	7
Real Timers	9	7
Agitators	8	8
Fabricators	7	9
Alley Oops	6	10
Hustlers	6	10
Foul Five	5	11
Chizzlers	4	8
Weightless Wonders	4	8

AFGE 2284 Meets Oct 10

The American Federation of Government Employees Lodge 2284 will hold a meeting in the Webster State Bank at 5 P.M. on October 10. Members are urged to attend.

1966 MSC/EAFB Flag Football League Schedule

American Division	
1. P & PD-Hustlers	
2. CAD	
3. MPAD-G&P	
4. FSD	
5. IESD	
6. Lockheed	
7. Link	
8. Philco/TR	
9. Grumman	
10. ANG	
11. 2578th	

Date	Team/Time
Oct. 3	17-15/6 P.M.
	6- 4/8 P.M.
Oct. 4	18-14/6 P.M.
	7- 3/8 P.M.
Oct. 5	19-13/6 P.M.
	8- 2/8 P.M.
Oct. 6	20-12/6 P.M.
	9- 1/8 P.M.
Oct. 7	21-22/6 P.M.
	10-11/8 P.M.

National Division	
12. SSD	
13. SMD	
14. FCD	
15. P&PD	
16. MPAD-FSB	
17. IBM	
18. NAA	
19. TRW	
20. Philco/WDI	
21. USCG	
22. 747th	

Date	Team/Time
Oct. 10	2-11/6 P.M.
	13-22/8 P.M.
Oct. 11	3-10/6 P.M.
	14-21/8 P.M.
Oct. 12	4- 9/6 P.M.
	15-20/8 P.M.
Oct. 13	5- 8/6 P.M.
	16-19/8 P.M.
Oct. 14	6- 7/6 P.M.
	17-18/8 P.M.

Space News ROUNDUP!

MANNED SPACECRAFT CENTER, HOUSTON, TEXAS
EMPLOYEE NEWS

Roundup Swap-Shop

(Deadline for classified ads is the Friday preceding Roundup publication date. Ads received after the deadline will be run in the next following issue. Send ads in writing to Roundup Editor, AP3. Ads will not be repeated unless requested. Use name and home telephone number.)

FOR SALE

Lotus 7 spares for many engines. Pair of 1 1/2" SU carbs, Volvo w/ford-Lotus manifolds and linkage \$35. (Healey, TR, etc) Coxworth A-111 billet cam \$40. Stock Anglia 105-E gearbox \$35 complete. Jan Farbman, WA 6-7192 or RI 7-3435.

1965 Volkswagen deluxe sedan, air, AM/FM w/stereo, other extras. 17,500 miles, xclnt condition. \$1650. E. Kuykendall, 591-4096.

1965 Corvette conv, leather trim, 4-speed stick, C&C group, tinted glass, wood steering wheel. AM/FM radio, transistorized ignition, positraction axle, 365-hp engine, good condition. Bill Ritz, 591-3352.

Cal-30 racing/cruising auxiliary sloop Satori, sleeps 6, completely equipped for offshore racing and cruising. 9 sails, impressive sailing record. \$13,500. Can be seen at Houston Yacht Club. P. A. Gaechter, GR 1-1663.

Swan 240 tranceiver, SW-117AC PS, Adcom 350-12 PS, microphone, mobile antenna and miscellaneous other items. All for \$325. C. E. Propp, HU 6-7119.

3-inch reflector telescope with altazimuth mount, tripod, 3x starfinder, 2 eyepieces (50x and 140x), coated optics; clearly shows Saturn's rings, Jupiter's moons. Like new. Cost \$59.50, sell for \$30. Jakey Wood, 203 Bayou Drive, El Lago, 877-4705.

1964 Chevrolet Impala super sport, all super sport equipment including bucket seats, Daytona blue w/light blue interior, 327-hp engine, power glide, power steering and power brakes, tilt steering wheel, factory air, tinted glass, AM-FM radio. W. G. Pratt, Kemah 877-2954.

Unique home for Sale—approximately two acres on Taylor Lake in El Lago Estates, 313 Lakeshore Drive, 3 bdms, 3 baths, LR, study, den, DR and complete built-in kitchen. By owner: Betty Reed, HU 8-2340 or Kemah 877-2926 (after 5 P.M.)

1964 Chevrolet Bel Air 4 dr., 283 C.I. V8, power steering, auto-trans, factory air, radio, two-tone green, 18,000 miles, excellent cond., \$1750. T. M. Carney MI 4-4809.

Brass Fireplace Ensemble—screen (draw type), andirons, fireset, grate, log, cart and corn popper—\$25. John Hoffman 666-1123.

Typewriter, portable w/case-Corona-\$10. Ping pong table, 3/4 inch wood, folding legs, regulation size with net, six paddles and badminton set—\$30., aluminum folding cot with foam mattress \$2.50, electric trimmer and edger, Silex model, used one year-\$15., auto luggage carrier, used one year (4'x3'x 8")—\$7.; call Charles Statz, HU 2-7607.

1960 Chevy, stick, good work car, needs fuel pump, \$50., C. G. Sullivan, Jr., 877-3244 (after 6 P.M.).

1965 Pontiac GTO hdtpt, 389 cu.in, 3-2 bbl carb., 3-spdr trans., 32,000 miles, \$2,150. Otto Schellberg, HU 4-7994.

Fiberglass boat, 15 ft., 40 hrsprw Scott motor, good running condn—\$350. Conn alto saxophone relaquered \$100. Jeff Lindsey 932-3354.

'23 Owens-cabin w/head, galley, depth finder, 185 HP V-8, \$1795. Can be seen at Watergate Yachting Center, Stall A44. Chuck Thomas, 932-4200.

Mouton Jacket—Like new, size 12, \$30. May be worn with black or brown. Excellent condition. Ray Southers, HU 2-7606, after 6 P.M.

Three piece curved brown sectional sofa, foam rubber cushions, excellent condition and modern turquoise day bed with foam rubber bolsters, excellent condition. Call Mrs. Patricia White, El Lago, 877-2231.

Three-bedroom, two bath, all brick home on large, naturally wooded lot in El Lago Estates, 314 Lake Shore Drive; den w/built-ins and fireplace; low down payment. Call John Stanley 877-2998 for information.

23" B&W TV, stereo, AM/FM radio combination, walnut finish, perfect condition, one year old, \$400. Call Mrs. William R. Kelly, HU 2-7053.

1963 Impala, 2 dr hdtpt coupe. White exterior, red interior. Factory air, excellent condn. Wife's car. Oscar Schutt, HU 4-8028, after 6 PM or on weekends.

1964 Ford Fairlane 500 sports coupe, 289-2V-V8, bucket seats, console, 4 spd trans, air conditioned, radio, new tires and battery! Many extras, 36,000 miles. White w/blue interior. \$1600, will consider trade and cash, Colburn MI 9-6361.

1966 Impala, white, SS, autotrans, air conditioning, big engine. Contact Col. Edward White, ext. 2221.

1963 Pontiac Tempest, 4 dr, automatic trans., air-conditioned, 51,000 miles, clean, good tires. Husband drafted. Must sell. \$800. Call Candy Cook, WI 5-7266.

1966 Mustang, silver blue, hardtp. Bucket seats, six cylinder, console transmission, air, radio, wire-wheels and seat belts. Gene Schrum, 877-3109.

Four bedroom, 2 bath, dble garage. Bayou Brae Subd., brick, three years old, built-ins. 5 1/4 G. I. loan. 932-3834 League City.

3 Bedroom house on deep water bulk-headed, private canal off Clear Lake, boat dock and 40 ft. crab dock. Central air, 2 baths, close to school; \$26,500 and 32 ft. sloop, for Bay or off-shore cruising, sleeps six, 3 mains, 2 jibs, 2 genoas, spinnaker 135 watt radio, direction finder, many other extras, \$12,500—contact Bob Musslewhite, 12 Harbor Lane, Lazybend (off Hgwy 518), phone Kemah 877-1200.

1964 Chevy, Malibu, 4 dr., R&H, auto-trans., Bill Nunnery GR 3-5009.

WANTED

Good practice piano, Marlow—HU 6-3497.

One or two working girls to share large home, 313 Lakeshore Dr., El Lago Estates. Call Betty Reed, HU 8-2340, or Kemah 877-2965 after 5 P.M.

Will share two bedroom apartment with working girl. Contact Elaine Brown HU 8-1600, ext. 136.

Baby sitter wanted in Clear Lake City-Nassau Bay area. Family atmosphere for 2-year old boy while mother works, hours 8 A.M. to 5 P.M. Contact Linda Deans, HU 8-2340, or HU 8-1243 after 5 P.M.

Wanted—1 two-horse trailer. Call Arnett E. Kilpatrick, Nassau Bay 591-2165.

Employed mature widow will share two-bedroom air-conditioned apartment with compatible lady. Located 10-miles from NASA. References exchanged. Phone GR 1-3283 after 5 PM.

FM and stereo system. John Patterson, HU 7-2655.

FOR RENT

For Rent—Saralla Road, 63 acre country estate. Nice 3 BR, re-decorated, air unit, storage, triple garage, nice barn, fenced, absolute privacy. \$150. Call 566-8662.

Share ride NASA area to U of Houston and return for classes 5:30 to 8:40 P.M. H. R. Banziger, GR 4-3571 (After 5 P.M.).

Car Pool wanted from Freeway Manor or Sun Valley 8:00-4:30 P.M. Bldg 45, no sleepy heads or afternoon loafers. Bill Hill 4-5611.

Unfurnished 3-bdr house, airconditioned, range, refrigerator, dishwasher, large fenced yard, completely redecorated inside and out. Exit 15 Gulf Fwy. Available late September. One-year lease, \$120/mo. Ron Konkell, HU 4-1020.

RIDER POOLS

Want in car pool or will pay beginning Sept. 6 from 2607 Cedar Drive, La Marque to Bldg. 419, 7:30-4 shift. Evelyn Villeneuve, WE 5-3878.

Paying rider wants daily ride between MSC and vicinity Shepherd and Westheimer-San Felipe. Sig Byrd, JA 4-5624.

Space News **ROUNDUP!**

SECOND FRONT PAGE

Smiles and Scrambled Eggs



CAPS and EGGS—Gemini XI Richard Gordon and Charles "Pete" Conrad sported baseball caps complete with saltie tradition of scrambled eggs when they stepped onto the deck of the USS Guadacanal following their successful three-day flight. Conrad and Gordon, each with the rank of Navy Commander, carried the baseball caps aboard their spacecraft and donned them just before they stepped onto the deck of the carrier.

FOR AS 501

First Lunar Module Undergoing Pre-flight Tests

The first Apollo flight-tested Lunar Module (LM) is undergoing preparations at Cape Kennedy Space Center, Fla., for launch aboard a Saturn V next year.

The 32,500-pound spacecraft, essentially a boilerplate (dummy) of later modules to land Americans on the moon, is the largest of three segments of the Apollo spacecraft. The boilerplate will be launched aboard NASA's first Saturn V. It is instrumented to measure vibrations, acoustics, and structural integrity at 36 positions, and to telemeter these

measurements to ground stations the first 12 minutes of the Apollo/Saturn 501 flight.

As 501 flight is suborbital. The Saturn will propel an unmanned Apollo spacecraft into space, then send the command module earthward to test its heat shield during reentry. The LM will remain with the last stage of the launch vehicle and will disintegrate during reentry, since it is designed to operate only in space, and has no heat shield.

The lunar module was flown to KSC last week aboard the Super Guppy.

Sustained Superior Performance



SSP AWARDS—Three members of the Landing and Recovery Division were recent recipients of Sustained Superior Performance Awards, left to right: Fred D. Koons, Paul T. Chaput and Jerry E. Hoisington.

Edward's Pilot Receives Top Award for M-2

Milton O. Thompson, NASA Research Pilot at Edwards Flight Research Center, California, was recently awarded the Society of Experimental Test Pilot's Ivan C. Kincheloe Award for the flight testing of the wingless M-2 lifting body.

Vice President Hubert H. Humphrey presented the 1966 Kincheloe Trophy to Thompson in private ceremonies held earlier in Washington. The trophy was formally presented to Thompson at the S.E.T.P.'s 10th Annual Awards Banquet, Saturday night, September 24, 1966.

Thompson was selected for the award "in recognition of outstanding professional accomplishment in the flight testing" of the wingless M-2 lifting body. Thompson is NASA's chief project pilot on the lifting body program. He made the first flight in the plywood M-2 in 1963. Earlier this year, Thompson made the first flights of the three-ton M-2 lifting body.

NASA's Flight Research Center is flight testing the M-2 to establish the technology needed for the design of future spacecraft capable of maneuvering inflight to a ground landing under pilot control.

Thompson has made the first five flights in the heavy weight M-2 that was constructed for NASA by the Norair Division of the Northrop Corporation.

The M-2 is air launched from a B-52 flying at 45,000 feet. Powerless, it descends at a rate of two miles a minute to a 200 mph glide landing, approximately four minutes after launch.

In addition to his piloting duties, Thompson has been responsible for significant engineering and design contributions of the M-2 lifting body.

The Ivan C. Kincheloe Award is made in memory of Captain Ivan C. Kincheloe, a former Air Force test pilot who lost his life in an aircraft accident. It is awarded by the test pilots' association yearly to the top test pilot in the world.

Thompson is the second pilot from NASA's Flight Research Center to receive the Kincheloe Award. In 1961, the late Joe Walker shared the award for his efforts in the X-15 flight program. Thompson has also piloted the X-15 rocket aircraft.

Gemini XI Photos Feature at AIAA

Richard Underwood, Photographic Technology Laboratory, will discuss Gemini XI photography at the October 10 meeting of the AIAA.

Underwood will also explain potential uses of space photography in geo-scientific fields, and will review benefits already realized from space photography. His presentation to be held in the MSC auditorium is scheduled to start at 7 P.M.

The meeting will be preceded by a dinner in the MSC cafeteria at 6 P.M.

Surveyor II Crashes; Trouble In Decent Rocket

Surveyor-2 which was launched September 20 and developed problems early in the flight crashed onto the surface of the moon at speeds in excess of 6,000 miles per hour.

A Jet Propulsion Laboratory official at Pasadena, Calif., said: "We kept firing the third rocket attempting to stabilize the spacecraft, but the rocket wouldn't fire, and the tumbling increased."

"We dumped the helium, turned on the radar adapter system and ran a few experiments before firing the 10,000 pound thrust retro engine. It burned for about 30 seconds before we lost radio contact with the craft."

Scientists at the Jet Propulsion Laboratory said trouble developed in one of the three descent rocket motors early in the flight and the spacecraft began tumbling through space. The tumbling prevented the craft's solar panels from locking in on the Sun and the loss of this power source drained the Surveyor's battery.

Surveyor-2 was scheduled to land softly in the center of the moon in the Sinus Medii (Central Bay), one of the nine possible landing sites for Apollo astronauts. The spacecraft was to photograph the Sinus Medii area and relay the photos back to earth.

First Stage Giant



MAN IS DWARFED alongside of the mammoth first stage of the Saturn V space vehicle. Workmen at the Michoud Assembly Facility prepare to transfer the first stage section from the Vertical Assembly Building to the Manufacturing Building at the National Aeronautics and Space Administration's Michoud Assembly Facility at New Orleans, La. This is the third Saturn V flight booster assembled at the Michoud facility.